LYLE G. MCNEILE, M. D. (Director Los Angeles City Health Department Maternity Service, Los Angeles). This paper reports a series of patients delivered in the home, not under favorable conditions, but nevertheless with an extremely low morbidity and mortality. The results are an example of what can be done in rural obstetrics. The author and his associates have carefully considered every modern discovery and aid which is commonly accepted, and with great ingenuity and common sense have adapted them to the conditions under which they work. This is a paper which can be read with advantage by any practitioner who practices obstetrics.

The Los Angeles Maternity Service, an out-patient obstetrical service coöperating with the Los Angeles City Health Department and organized for the purpose of caring for needy women in their own homes, operates under practically the same conditions. Doctor Peck has emphasized routine urinalysis, and the prevention of too rapid gain of weight during pregnancy as the greatest factors of prenatal care. We feel that in addition to these very important measures the blood pressure should be taken at each regular visit. We believe that a Wassermann test should be done on every obstetrical case. Doctor Peck has not stressed the necessity of a complete physical examination at the first visit. The time consumed in a careful examination of the nose, throat and teeth, heart, lungs and pelvis is small as compared to the satisfaction in "picking up" those focal infections which are probably the most important factors in the etiology of certain toxemias of pregnancy, cardiac and lung conditions which are adversely affected by pregnancy, and pelvic conditions which are likely to seriously affect the course of labor or the puerperium. The author points out that it is absolutely essential that the patient be seen at regular frequent intervals during pregnancy. It is extremely bad practice to fail to insist that this be done.

Doctor Peck in his technique has provided for sterile supplies for every patient. We furnish similar supplies in copper containers, which are cleaned, refilled and resterilized when used. We do not believe that the mercurochrome used in Doctor Peck's preparation has any effect because of the large amount of surface fat on the tissues of the vulvar region. Careful observations and controlled cases have demonstrated to our satisfaction that a 3½ per cent tincture of iodin preparation, sponged off with iodin-alcohol, is more satisfactory.

While there is a widespread feeling in the United States against the use of chloroform, I feel that its danger has been greatly overestimated. It should not be used if there is any evidence of toxemia, or in the presence of cardiac or renal complications. I agree most heartily with Doctor Peck that, except under unusual conditions, pituitary extract should not be used before delivery on account of the danger of injury to both the baby and the maternal soft parts.

In the United States twenty-five thousand women die annually from the results of childbirth. Competent observers believe that the basic method used to reduce this high mortality must be early complete examination and supervision during the whole period of pregnancy combined with conservative and aseptic care during labor and adequate after-care. The Los Angeles Maternity Service, caring for poor women in their own homes, under the most adverse conditions, during the first ten years gave prenatal care to 14,155 patients and delivered 7285. The maternal mortality was one death in 910 deliveries. The infant mortality was one death in twenty-three deliveries (this including all stillbirths, and all deaths during the first ten days). All premature babies from the fifth month of pregnancy were included. The technique and methods used were very similar to those described by Doctor Peck.

PEPTIC ULCERS—DIAGNOSIS AND TREATMENT*

By PHILIP KING BROWN, M. D.
San Francisco

SO much direct and indirect criticism of medical treatment of peptic ulcers has been indulged in recently that I wish to point out the confusion which has arisen over the misuse of the term "medical treatment," and to show, from the statistical studies of peptic ulcer treated in the Southern Pacific Railroad Hospital, that when properly carried on, medical treatment of uncomplicated ulcer is the method of choice; and, on the other hand, that many of the complications cannot be considered amenable to treatment by any method but surgery. The important point in the situation is the matter of complete diagnosis and a clinical investigation into the part played by the complication in preventing cure or contributing to recurrence.

ETIOLOGY

There is no direct proof of the etiology of chronic peptic ulcer in man. It has not been difficult to produce acute ulcer by experiment in animals and, although these ulcers are quite unlike those found in man, the presumptive evidence is full of suggestion as to etiology of chronic ulcers in human beings.

In 1903 Lorenzi noted hemorrhage in gastric mucous membrane in animals whose pneumogastric nerves were sectioned below the diaphragm, and if the animals survived over twenty-four hours, mucous erosions were found. Sarlta later showed that adding three per cent hydrochloric acid resulted in these erosions becoming ulcers.

Van Yzeren in 1901 reported such pneumogastric resection in twenty rabbits, with the occurrence of chronic pyloric ulcer in ten. Seven of the remainder died within five days, whereas ulcer developed in the earliest of those who survived, in seven days.

Ophüls of Stanford repeated these experiments on thirty rabbits and found ulcer developing in one rabbit after twenty-four days. The twelve examined before that showed no ulcer, whereas one-third of those examined after twenty-four days had ulcers.

More recently, Singer [1] has discussed injury to the vagus as a cause of duodenal ulcer and the rôle of affections of the vagus in the development of gastric ulcer.

Rodov [2] has presented an illuminating discussion of the biological relation of gastric ulcer and the vegetative system. Roller from his work in Ortner's clinic confirms Pollak's findings of ulcer as a sequence to vagus disease in the course of chronic encephalitis and reports ulcer from vagus inflammation from proximity to tuberculous mediastinal glands, in the gastric crises of tabes where it is common, and in a case of in-

* From the records of the Southern Pacific Hospital, San Francisco.
* Read before the Pacific Association of Railway Surgeons, Reno, Nevada, August 23-24, 1929.

fluenza encephalitis with extensive herpes, all regarded as chronic diseases of the vegetative system.

The significance of these findings may seem remote when we seek to apply them to human beings, but they bear on the defensive mechanics of the gastric and duodenal mucous membrane. Toxic influences on nerves are peculiarly selective and further investigation may bring to light some influence that we do not now see clearly. Furthermore, the danger of ulcer must be borne in mind in considering any interference with the vagi in the surgical relief of bronchial asthma, where recently it has been proposed and successfully carried out that section of the vagus below the recurrent laryngeal be done in protracted cases.

The etiology of peptic ulcer based on pathologic anatomy received earliest contribution from Markel in 1860, who reported finding vascular lesions in gastric ulcer—thrombosis of the pancreatic duodenal artery.

Hauser, in a monograph published in 1883, further emphasized this and stated that hemorrhagic infarct precedes ulcer formation and always where there is local disease of the blood vessels. There is no development of new vessels in these areas and therefore the chronicity of ulcers in humans in distinction to experimental ulcers in animals.

Omata [3] confirmed the chronicity of experimental ulcers by ligating various blood vessels of the stomach.

Ophüls, commenting on Hauser's claim in 1913, calls attention to the fact that hemorrhage in ulcer is not from the erosion of healthy vessels, or venous hemorrhage would be commoner than arterial, whereas it is quite uniformly the case that it comes from thrombosed or sclerotic arteries. That the thrombosis is not secondary to the ulcer is shown by the fact that it extends beyond the confines of the ulcer. In Ophüls' twenty-three autopsy records of gastric ulcer, eighteen were arteriosclerotic in aged persons, four were in young patients with thrombo-arteritis and one was in a young patient with an acute embolus.

These findings have the interesting value of explaining why chronic gastric ulcer is so difficult to treat successfully by medical means.

Rosenau's success in producing peptic ulcer of embolic origin with streptococcus cultures from alveolar abscesses injected into animals is a further step in developing the picture of what directly underlies the beginning of this trouble.

Brites [4] discusses convincingly the rôle of embolic infarction in the pathogenesis of ulcer.

COMMENT ON THEORIES OF CAUSATION

These theories of the etiology of peptic ulcer are open to criticism and we can safely present only certain generalities bearing on them.

1. Peptic ulcer is a condition of middle-life rather than age, especially in women. In our last one hundred patients, 32 per cent were between the age period 30 to 39, and 34 per cent between the age period of 40 to 49.

2. It is apparently commoner in men than in women, although German statistics show about even distribution.

3. It is almost universally associated with bad dietary habits, sinus and oral sepsis, and diseased tonsils.

4. Some of the conditions which complicate it, appendicitis and cholecystitis, are suggestively connected with oral sepsis, although not either of them necessarily is causatively related to the ulcer.

5. The markedly greater proportion of ulcer cases among male employees than among female employees is strikingly shown in the Southern Pacific Company and the percentage is highest among those whose occupation and hours contribute to irregular and bad eating habits and inability to give adequate attention to daily mouth hygiene or to proper dentistry.

In view of the absence of definitely established etiology and only presumptive evidence of the relation of focal sepsis, it seems important to inquire whether the high rate of medical cures in one hospital may not be due to two important factors—teaching patients what, when, and how to eat, and removing all possible infections in the upper respiratory and digestive tracts.

COMMENTS ON MEDICAL TREATMENT

The somewhat facetious statement of W. J. Mayo, quoted by Douglas,[2] that the time to operate on a gastric or duodenal ulcer is after it has been cured nine times by medical treatment means simply that such a patient never was completely studied, the complicating conditions were not understood or dealt with, and the bad dietary habits were not changed. Medical treatment should mean the cleaning up of all infections in the upper tracts, a study of the chemical and motor efficiency of the stomach and the satisfying of the examiner that neither gall-bladder disease, pancreatic disease, adhesions from unknown causes, appendix pathology, nor even hemorrhoids complicate the patient's condition. Finally, the patient's occupation, habits of living, marital state, and teachability, all play a rôle in making a permanence of cure in the medical treatment of ulcer. A drunkard is not cured by stopping his drinking, and if you cannot deal successfully with all the factors that influence his taking of alcohol, including a continuous abstinence from temptation, as well as building up a new scheme of living, it is hardly fair to speak of the drunkard as cured. That we rarely have to resort to surgery in the treatment of duodenal ulcer, and then only because of complications, acute or chronic, for which medical treatment has no remedy, is due, in the writer's estimation, to the fact that so-called medical treatment has been too largely the treatment of symptoms and not underlying conditions. In this connection these few laws are laid down in our hospital service, and as yet there has been no single reason to change them:

1. Smoking is interdicted because of the overwhelming evidence in testimony of our patients that it aggravates and even produces pain.

2. Alkaline therapy is absolutely never used. Repeatedly patients come to us in whom ulcer has been diagnosed from typical symptoms and we obtain a history of constant use of soda bicarbonate or calcined magnesia, or both after meals, because they have learned to know that they might thereby avoid pain. The habit is pernicious, for pain is an excellent warning that an ulcer is active and that a dietary regimen is in order. Morphin in appendicitis is the only more acutely dangerous therapy that occurs to me, and woe be to the doctor who obscures his case by unwise use of that drug. The well-treated ulcer patient is a well-trained dietitian, and if he is wise he will live within the confines of what he can eat without pain. The entire absence of pain in a small percentage is well known, and the shock of perforation has been the initial symptom of ulcer in some cases.

3. A single test-meal is removed in all patients that have not the history of recent bleeding. This meal is preceded nine hours by three or four large prunes. The almost universal hyperacidity in uncomplicated cases can be assumed and is not a matter of much moment, but when absent, particularly in gall-bladder complications, it may be very significant. The prune residue, if found after test-meal, is an important indication of retention. The reason for these procedures will be evidence from the discussion of the diagnosis of peptic ulcer.

4. Rectal feeding we have never yet found necessary. Intravenous glucose is used rarely. Transfusion may be invaluable.

5. Rest in bed, especially if any bleeding is going on, is imperative.

SUBJECTIVE SYMPTOMS

The subjective symptoms of peptic ulcer are fairly clean-cut and in very few conditions are they of more importance in making a diagnosis. Most patients, at least 60 per cent, give a history that is quite characteristic. When one hears that for several years there have been periodic attacks, lasting four to six weeks, of pain in a small area, generally near the center of the epigastrium, coming on two to four hours after meals, or immediately after meals; that some foods cause it more commonly than others; that soda or eating relieves it when it comes late after meals; that soda relieves it and food makes it worse when the pain follows soon after taking it, one can suspect at once duodenal or gastric ulcer. The history of sudden weakness with or without nausea, of tarry stools or the vomiting of blood, and finally the occasional relief from change of position is of decided value in the diagnosis of gastric ulcer. Such a history opens the field for the development of corroborating evidence and this should be carried out as far and as often as possible while the patient is in bed. The physical examination may reveal nothing but a little local tenderness in the epigastrium and the usual bad condition of the mouth.

Pain that is characteristically night pain, coated tongue, bad breath, constipation, diffuse abdominal pain, all call for consideration of complicating conditions. The relative frequency of the chronic appendix with pylorospasm has to be given careful study. The retrocecal appendix when pressed upon may give a referred pain in the epigastrium without tenderness where the pain is felt. The appendix may be attached to the gall bladder or the pylorus as it has been twice in our series. The history of gas in stomach and cecum and as far as the hepatic flexure of the colon should make us suspicious of the gall bladder or of adhesions in the right upper quadrant, interfering with pyloric efficiency. The investigation at this point is contributed to greatly by two things. Simple uncomplicated gastric or duodenal ulcer in a patient resting in bed on a very light, bland diet, given in small quantities at frequent intervals, will cease to cause any pain in a day or two. The continuance of pain should always invite the consideration of complications and the chief of these are chronic appendicitis and cholecystitis with or without adhesions, ulcer at or very near the pylorus, six-hour retention, mucous colitis, or even bad hemorrhoids. Tuberculous peritonitis and tuberculous glands at or near the appendix have twice been found in our series.

VALUE OF AN X-RAY STUDY

The second thing that is important at this point is whether an x-ray study is immediately in order. From it we may expect the following facts to be brought out:

1. Is there a defect in the contour of stomach or duodenum characteristic of ulcer?

2. Does the duodenum fill normally? If irregular, and especially if immovable, pictures are necessary in order to get the details of the defect and to determine its constancy and relation to adjacent parts.

3. Does any irregularity in waves suggest a local defect?

4. Does the stomach empty within six hours?

5. Is the gall bladder visualized in plates made before barium is introduced?

6. Does the pressure of an enlarged gall bladder give a crescentic indentation to the duodenum?

7. Do lateral views of the bulb show the same arborization defect in all the plates?

8. The size of the liver is frequently confirmed in x-ray examinations.

9. The filling and emptying of an appendix and the movability of the cecum may give valuable data. We are inclined to the belief that the visualized appendix forty-eight hours after the barium meal betokens an unhealthy appendix because of its spasticity and is associated generally with a spastic colon, and any visualized gall bladder is open to suspicion.

At this point a word about the modern methods of outlining the gall bladder with tetraiodophthalein and other substances, may be in order. It is my personal experience that these methods have contributed very little to our clinical knowledge. Tetrabromphenolphthalein is a "dose" any way one looks at it or takes it. It is not free from

danger when given intravenously, and is nauseating by stomach. The repeated x-raying is bad, expensive, and in many cases the results are most uncertain. When subjective and objective symptoms and a good history do not direct the proper treatment, the x-ray of the gall bladder after dye rarely does. It is pain, fever, or local symptoms that are our best guides. In a recent case where clinically and twice by x-ray cholecystitis was diagnosed, a third investigator using the dye considered the gall bladder normal. Our clinical sense must not be warped. We have tried the French method of giving 300 grains of bromid, which produces the effect of making the gall bladder more easily outlined. I have found it valueless thus far.

The complaint is made by some surgeons that clinical and x-ray diagnosis of ulcer has resulted at times in failure to find ulcer at operation. There could not have been in such cases any justification for surgery. If x-ray had revealed typical deformity with six-hour retention, a characteristic history of pain after food with occult blood in a milk residue stool, it is foolish to say nothing is wrong. Certainly the case was not properly studied, or the operation properly conducted.

COMMENTS ON SPECIAL SYMPTOMS

1. *Hemorrhage.*—Great care must be exercised in excluding bleeding gums, varices, and hemorrhoids as a possible source of occult blood. It is about five to ten times more likely that blood vomited or found in stool comes from ulcer than from cirrhosis of the liver, and in this latter condition pain is not graphic. A localized hepatitis from diseased gall bladder will give a tenderness that is suggestive and which approaches the finger when the abdomen is pressed upon below the gall bladder. Moynihan and Robeson both call attention to pain produced when the point halfway from gall bladder to navel is pressed upon. Pain, if it does occur, is not characteristically influenced by food.

Hemorrhage from the stomach in chronic appendix condition is not so rare. Moynihan, in his first reference to it, reported it twelve times in cases operated for ulcer of the stomach where only a diseased appendix was found. With a history of clinical findings not characteristic of ulcer and yet with repeated occult blood, it is safe to suspect cirrhosis first and then the appendix. Chronic cholecystitis has also been the cause of gastric hemorrhage, hence the importance of convincing x-ray study, history, and physical examination in any doubtful case.

2. *Pain May Be Deceiving.*—Mace reports diaphragmatic pleurisy on right side simulating ulcer pain, and we confirm this finding. Delayed emptying from adhesions or gall-bladder disease may be accompanied by pain near the pylorus from ineffectual gastric peristalsis. Mucous colitis produces at times a most distressing and baffling picture of gastric disorder, nausea, pain, and tenderness. It has become part of our routine to

TABLE 1.—*Lenhartz's Diet*

Day	Calories	Eggs	Milk	Milk Sugar	Scraped Beef	Boiled Rice	Zwieback	Butter	Chicken
1	280	Raw 2	100 cc. (3½ oz.)						
2	470	Raw 3	200 cc. (6⅔ oz.)						
3	637	Raw 4	300 cc. (10 oz.)	20 gm. (5 dr.)					
4	777	Raw 5	400 cc. (13⅓ oz.)	20 gm. (5 dr.)					
5	966	Raw 6	500 cc. (16⅔ oz.)	30 gm. (1 oz.)					
6	1135	Raw 7	600 cc. (20 oz.)	30 gm. (1 oz.)	36 gm. (9 dr.)				
7	1580	Raw 4 Soft 4	700 cc. (23⅓ oz.)	40 gm. (1⅓ oz.)	70 gm. (2½ oz.)	100 gm. (3½ oz.)			
8	1720	Raw 4 Soft 4	800 cc. (26⅔ oz.)	40 gm. (1⅓ oz.)	70 gm. (2½ oz.)	100 gm. (3½ oz.)	20 gm. (⅔ oz.)		
9	2138	Raw 4 Soft 4	900 cc. (30 oz.)	40 gm. (1⅓ oz.)	70 gm. (2½ oz.)	200 gm. (6⅔ oz.)	40 gm. (1⅓ oz.) or toast 20 gm.		
10	2478	Raw 4 Soft 4	1000 cc. (33⅓ oz.)	40 gm. (1⅓ oz.)	70 gm. (2½ oz.)	200 gm. (6⅔ oz.)	40 gm. (1⅓ oz.) or toast 20 gm.	20 gm. (⅔ oz.)	50 gm. (1⅔ oz.)
11	2941	Raw 4 Soft 4	1000 cc. (33⅓ oz.)	40 gm. (1⅓ oz.)	70 gm. (2½ oz.)	300 gm. (10 oz.)	60 gm. (2 oz.)	40 gm. (1⅓ oz.)	50 gm. (1⅔ oz.)
12	2941	Raw 4 Soft 4	1000 cc. (33⅓ oz.)	40 gm. (1⅓ oz.)	70 gm. (2½ oz.)	300 gm. (10 oz.)	60 gm. (2 oz.)	40 gm. (1⅓ oz.)	50 gm. (1⅔ oz.)
13	3007	Raw 4 Soft 4	1000 cc. (33⅓ oz.)	40 gm. (1⅓ oz.)	70 gm. (2½ oz.)	300 gm. (10 oz.)	80 gm. (2⅔ oz.)	40 gm. (1⅓ oz.)	50 gm. (1⅔ oz.)
14	3007	Same as thirteenth day.							

have the history of passing mucus looked into and stool of all ulcer subjects examined for mucus.

Benjamin and Schwartz[5] report angina pectoris with duodenal ulcer, and Doctor Coffey and I have had more than one such case. It must be remembered that the sphincter innervation through the pneumogastric in the body is the same, and pylorospasm from ulcer as well as from gall-bladder disease may cause pain radiation exactly simulating angina pectoris.

The need of a routine Wassermann test was called to our attention many years ago, for we had a surprising number of cases of ulcer in syphilitics and found occasionally that the ulcer did not heal satisfactorily until the syphilis was thoroughly treated. We were forced to make exception to the rule that the company does not treat venereal disease, because without antisyphilitic therapy these cases were not relieved. Occasionally hemorrhage from the stomach has been a symptom in these cases where the pain symptoms were not present or not characteristically so, and the x-ray revealed no ulcer. These may be cases of hemorrhage in early cirrhosis.

3. *Fever* is a confusing symptom, rare in uncomplicated ulcer but occasionally reported. Even chills with high fever has been reported, whether from absorption of protein or not is guesswork. In view of the frequency of cholecystitis with ulcer, the intermittent fever of Charcot should be kept in mind. In our experience it is not always accompanied by jaundice.

TREATMENT

Whatever the suspected etiology, rest in bed on Lenhartz's or our Southern Pacific diet in all cases during investigation. With Jarotsky's so-called milkless diet of albumen and fat we have had no experience.

TABLE 2.—*Southern Pacific General Hospital Diet for Patients with Peptic Ulcer—"Brown" Diet*

First day: Four ounces of milk every two hours—7 a. m. to 7 p. m. (seven feedings). If patient has night pain on this diet give a feeding next night at 11 p. m. if awake, or leave four ounces of milk at bedside to be taken if pain recurs.

Second day: Add one soft boiled or poached egg twice daily at second feeding and sixth feeding.

Third day: Add milk at noon, fourth feeding. Add cream of wheat morning and night, first and sixth feedings. Increase milk to five ounces per feeding.

Fourth day: May have three eggs during the day, milk toast once and cereal twice. Second, fourth and sixth or seventh feedings. 9 a. m., 1, 5 or 7 p. m.

Fifth day: Continue seven or eight feedings of the above foods, from 7 a. m. to 7 or 9 p. m. through the fourteenth day, increasing gradually the number of eggs to six and the amount of milk toast and cereal. Scraped meat, broiled slightly, with no pepper may be substituted in equal volume for eggs, after stools have become negative for occult blood any time after the seventh day.

On and after the fifteenth day the patient is given puree of vegetables, or cooked fruit, the "increased Lenhartz."

On the seventh day and thereafter, increase milk to seven ounces if patient has no symptoms. In case the patient has pain other than referred to on the first night, hemorrhage, retention at six hours or other complications, the staff man will prescribe the proper diet and ask for surgical consultation.

Milk should be taken ice cold and with a tablespoon if patient has been bleeding or if there be much pain.

The full amount of milk need not be taken if patient does not wish it, nor should the rest of the diet be given in these amounts if patient is satisfied with less.

Do not smoke. Move bowels every other day with enema and send small amount to laboratory until twice negative for occult blood. After bleeding ceases, milk of magnesia may be used instead of enema.

Time will be saved if patients stay strictly in bed. This is imperative if there should be any occult blood.

Test-meal in cases where no hemorrhage has occurred within a week. Precede this the night before with prunes so as to get a line on retention. The chief value of the test-meal is to help weigh any complications. An x-ray study is in order if available, especially in suspected gastric ulcers which are potentially surgical. If a good x-ray examination cannot be secured, the prune residue is a valuable hint and the clinical evidences of complications can be found if carefully enough looked for.

Bleeding is not regarded as counterindication to Lenhartz's diet. If extreme, it calls for immediate medical treatment. Ewald has advised lavage with ice water. Personally, we use calcium chlorid intravenously, five cubic centimeters of a 10 per cent solution obtained in ampoules and followed by one of the coagulating adjuvants like whole blood, thromboplastin, etc. I have once successfully resorted to strong adrenalin solution poured through a stomach tube inserted to wash out masses of decomposing clots. The adrenalin was washed out with ice water after a few minutes.

Transfusion not only helps to check bleeding but prepares the patient for the possible need of surgery for tying off the bleeding vessels. We have dealt with a number of patients brought in with 20 per cent hemoglobin and 1,250,000 red cells. Since the introduction of transfusion none of these have died.

Retention evidenced by the distress, lack of appetite, loss of weight, nausea, vomiting, etc., and confirmed by x-ray, does not necessarily call for surgery. Cleaning out such a stomach and the Lenhartz diet will usually reduce the retention steadily. Our plan is to recheck in twelve days with gradually increased diet. As much as a 50 per cent retention from ulcer has disappeared in that time. A few cases, not good operative risks, have had the rest and diet continued a month or even more, and we are gratified to find that it is worth while often enough to give it serious consideration.

Burning and acidity in uncomplicated cases correct themselves almost at once on the Southern Pacific or Lenhartz diet. If they do not, look for complications. In a recent case of a young man, we could detect no complication by any investigation and even resorted to belladonna and alkali with indifferent result, when he had a typical gall bladder night pain which cleared the situation. A second case was relieved at once by dealing with the wife who was a scold and whose visits were followed by marked hyperacidity. So great is my prejudice against the Sippy diet, its use of alkali, and of stomach or duodenal tube to remove secretion, that I feel it the worst possible regimen on which to put an ulcer case. Who ever heard of a surgeon sticking a stomach tube down a patient as a routine after a gastro-enterostomy or poking in soda and magnesia? It is a good motto to let well enough alone. Most ulcer patients have learned to use soda to relieve their pains, and it is a dangerous practice. How much more rational and simple to deal with the underlying condition.

Rechecking the gastric secretion after *all* symptoms have disappeared has borne out the wisdom of this procedure. The hyperacidity in uncomplicated cases disappears with the pain and also the occult blood as the ulcer heals.

Gastric ulcers are the common meeting ground of physician and surgeon. I have said above that they are potentially surgical, but since the introduction of protein therapy (and we have used sterile fat-free milk) we have had such good results in gastric ulcer patients that I am inclined to reserve the favorable cases for such treatment. If the ulcer crater as shown on x-ray plates is not too large and the stomach empties normally and occult blood disappears in two weeks and the crater itself gets steadily smaller, I would defer surgery. Marten [6] has reported on milk injections as they have influenced symptoms and progress.

It is obvious that as the etiology of peptic ulcer in human beings is still a good deal uncertain in spite of certain definite evidence in part of the cases studied we cannot base therapy on etiology. It is reasonable in any event to remove all foci of infection and to prescribe a less stimulating and irritating diet. For the healing process we are dependent upon the well-established fact that mucous membranes show a remarkable tendency to heal if given any sort of chance.

An explanation of the tendency to recurrences may be found in what is established in etiology. If vagus neuritis from infection be a cause, then unless the vagus returns to normal we may expect recurrences. We cannot hope to cure the arteriosclerotic ulcers of the aged by medical means, nor can we expect to see regeneration of an area where necrosis results from thrombo-arteritis. If the involved area be small, it is conceivable that healing may take place. Hurst [7] suspects cancerous change if the blood continues and the crater, after a month, is unchanged. R. Schmidt long ago called attention to Boas Oppler bacilli in the stool of these cases even when the gastric content still contains free HCl, and we have confirmed this finding.

Finally, clean up the infections as fast as possible, and begin teaching dietetics early. The men who live in restaurants, eat irregularly and what they like, especially when tired, neglect their infections, who overeat and react badly to worry and strain are poor medical patients, but they make up the surgical failures quite as often.

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THE LURE OF MEDICAL HISTORY

THE WILLIAM BEBB COLLECTION OF PRINTS OF PARIS HOSPITALS*

By EVA WEST
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IN the field of medical history there are endless opportunities for the satisfaction of almost any collector's fancy. Pictures, expressing so much more readily than words could ever do, are being more and more appreciated as desirable items in medico-historical libraries. Many notable collections of prints relating to medical history are to be found in California, among which may be mentioned those of Dr. LeRoy Crummer in Los Angeles, Dr. Herbert Evans in Berkeley, and Dr. William Kerr in San Mateo. To these should be added the interesting collection of prints relating chiefly to French hospitals deposited by Dr. William Bebb of Elkhorn, Wisconsin, in the University of California Medical School Library, San Francisco.

The Bebb collection includes about twenty prints of English hospitals and one or two of old American hospitals, but it is especially rich in material relating to the great hospitals of Paris. Practically every important hospital in Paris is represented not only by century-old prints of floor plans and elevations, but also by engravings, etchings, and lithographs of interior and exterior scenes associated with the buildings and grounds about them.

About 1810, H. Bessat apparently made a series of drawings combining general ground plans with front elevations of the leading hospitals of Paris. Engraved by Thierry, this series is especially well represented in the Bebb collection. A later group of scenes connected with the various hospitals was made by T. Guerin and engraved by C. Detrich for the purpose of illustrating a series of magazine articles on the Paris hospitals. There are a few early engravings of the seventeenth and eighteenth centuries included in the collection.

One of the most remarkable items in the Bebb collection is the original floor plan to scale of one of the provincial hospitals designed in 1809 by Comber for Bordeaux. The characteristic arrangement of the Parisian hospitals of this period, in the form of low buildings about large open courts, was apparently preserved, as this sketch shows, in the provinces. The space assigned in the building to the different types of service is clearly indicated, and careful arrangements seem to have been made for proper hygienic management.

THE LEADING CHARITY HOSPITALS OF PARIS AS ILLUSTRATED IN THE BEBB COLLECTION

L'Hôtel Dieu.—L'Hôtel Dieu of Paris is one of the oldest hospitals in the world, being founded

* This note was prepared from descriptive cards made by Miss Eva West for use in exhibiting the collection, and was edited for publication by Chauncey Leake and Sanford Larkey.